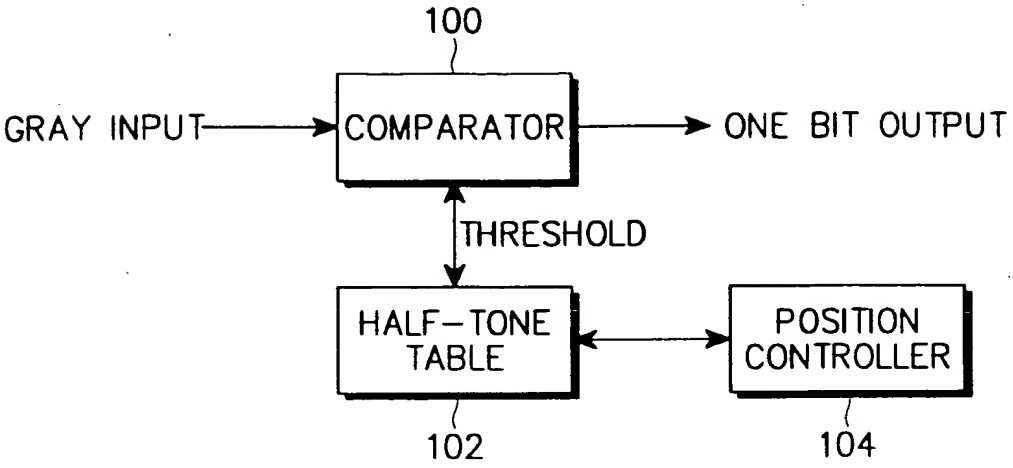
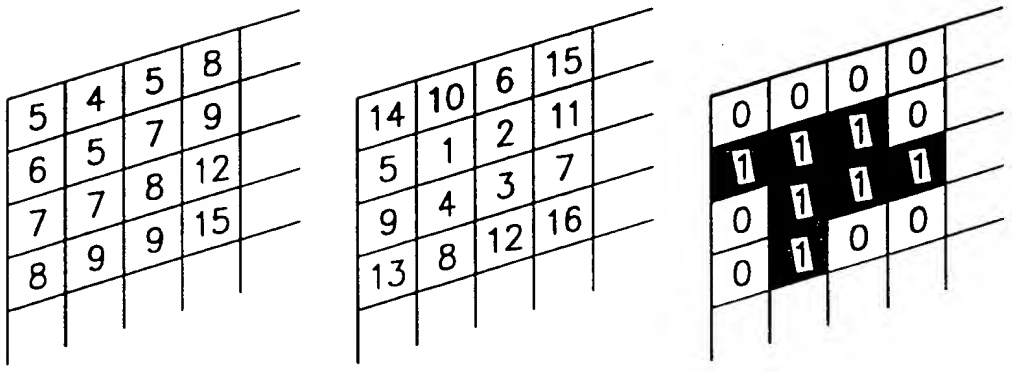


FIG. 1



(a) GRAY INPUT (b) THRESHOLDS (c) ONE BIT OUTPUT

FIG. 2

FIG. 3

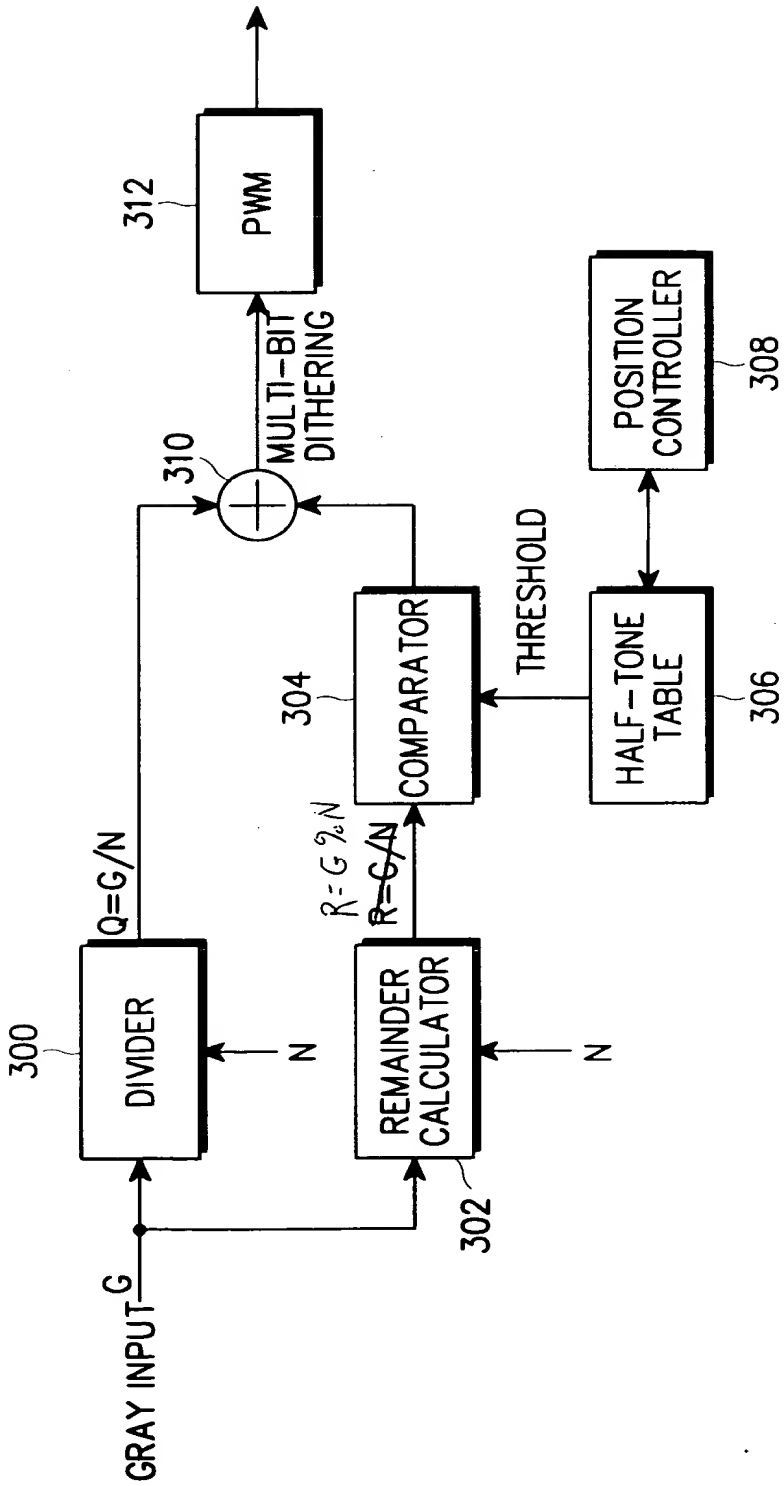
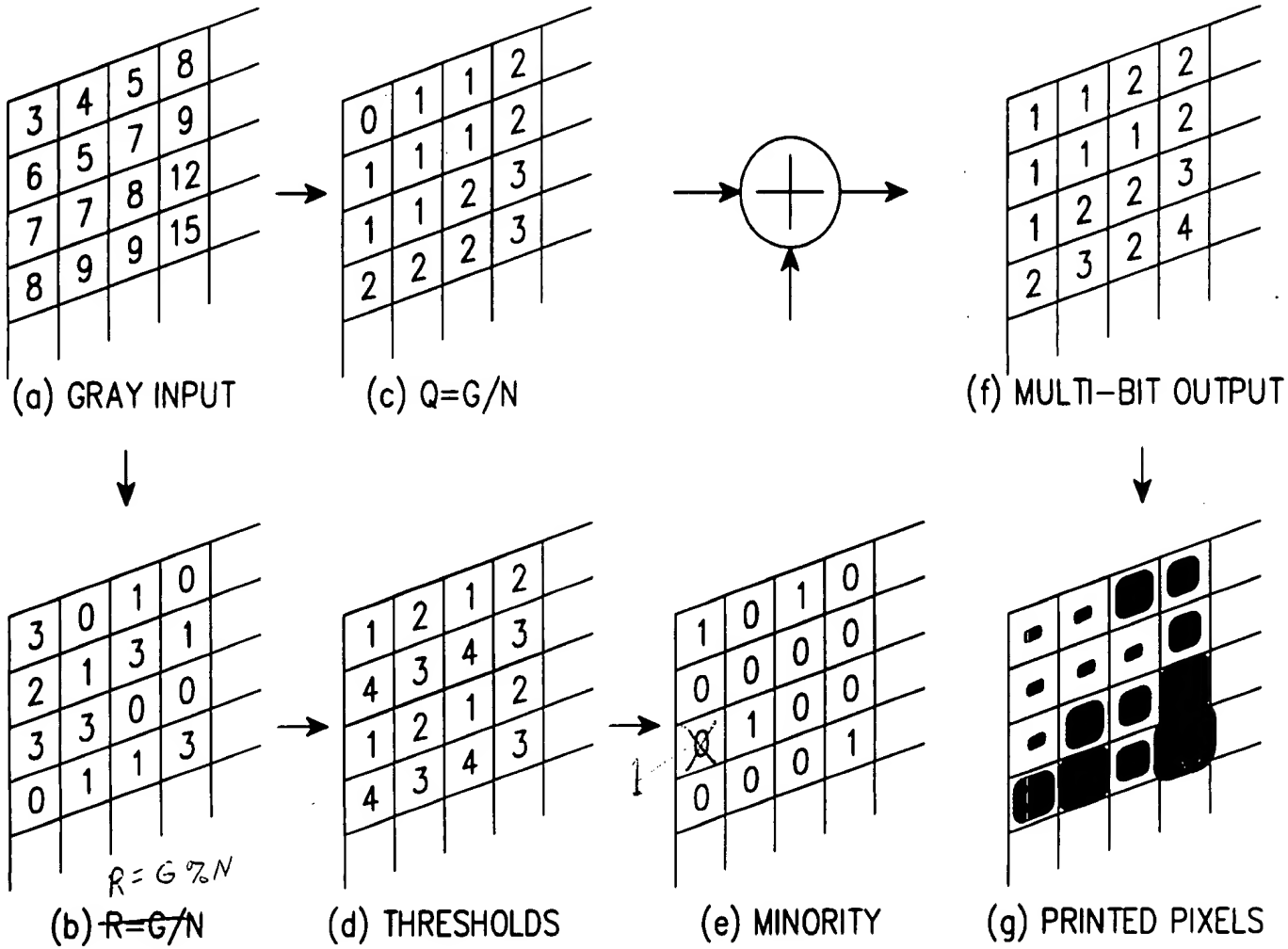

GRAY INPUT
G
300
DIVIDER
N
Q=G/N
302
REMAINDER CALCULATOR
N
R=G%N
R=G/N
304
COMPARATOR
THRESHOLD
306
HALF-TONE TABLE
308
POSITION CONTROLLER
310
MULTI-BIT DITHERING
312
PWM

FIG. 4


3 4 5 8
6 5 7 9
7 7 8 12
8 9 9 15
(a) GRAY INPUT
0 1 1 2
1 1 1 2
1 1 2 3
2 2 2 3
(c) Q=G/N
1 1 2 2
1 1 1 2
1 2 2 3
2 3 2 4
(f) MULTI-BIT OUTPUT
3 0 1 0
2 1 3 1
3 3 0 0
0 1 1 3
R=G%N
(b) R=G/N
1 2 1 2
4 3 4 3
1 2 1 2
4 3 4 3
(d) THRESHOLDS
1 0 1 0
0 0 0 0
0 1 0 0
0 0 0 1
(e) MINORITY
(g) PRINTED PIXELS

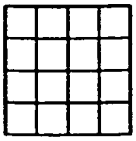
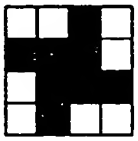
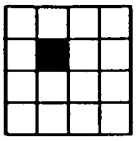
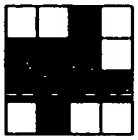
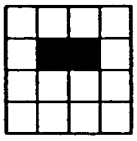
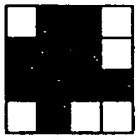
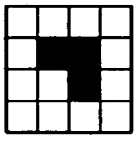
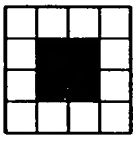
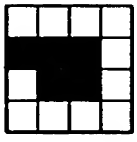
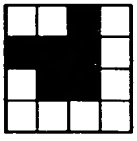
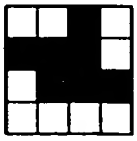
	MULTI-BIT DITHERING	ONE-BIT DITHERING		MULTI-BIT DITHERING	ONE-BIT DITHERING
Gray=0			Gray=8		
Gray=1			Gray=9		
Gray=2			Gray=10		
Gray=3			Gray=11		
Gray=4			Gray=12		
Gray=5			Gray=13		
Gray=6			Gray=14		
Gray=7			Gray=15		
			Gray=16		

FIG. 5